Assembled but unrehearsed: corporate food power and the ‘dance’ of supply chain sustainability

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ABSTRACT

In recent years, many of the companies collectively known as ‘Big Food’ have undertaken efforts to assess and improve agricultural sustainability, both within their own supply chains and as members of multi-stakeholder initiatives (MSIs). Taking up Friedmann’s call for closer attention to corporate sustainability practices, this paper finds that companies are doing more than they advertise, but making slower progress than originally hoped. Up to a point, political economy perspectives on corporate power and governance help to explain both why these MSIs have taken shape, and why their corporate members’ immense market power might not guarantee quick results. Yet these perspectives do not fully capture how corporations’ sustainability efforts contend with not only other actors’ challenges to their legitimacy and authority, but also their own lack of knowledge and access to information. This paper therefore also draws on global assemblage and science and technology studies (STS) frameworks in order to analyze corporate power – and its limits – inside a set of ongoing sustainability initiatives.

KEYWORDS

Corporations; assemblages; food regime; sustainability; science and technology studies; farmers

Introduction

We look at our business and say, ‘How can we remake ourselves?’ (Richard Smucker, CEO of Smucker’s (Fortune, May 15, 2015))

Fortune magazine called it a ‘war,’ the New York Times described a ‘seismic shift;’ the Guardian simply asked, was it the end? All these 2015 headlines referred to the ominous trends facing the branded manufacturers known collectively as Big Food (Fortune, May 15; New York Times, November 6; Guardian, March 12). Consumers were increasingly opting for organic and niche brands, and bypassing the supermarket’s center aisles in favor of the supposedly fresher foods around the periphery. As companies reported shrinking market shares and billions of dollars in lost sales, Campbell’s then-CEO Denise Morrison warned that they would need to do more than freshen up a few product lines in order to reverse consumers’ ‘mounting distrust of so-called Big Food’ (Time, February 18, 2015).

In fact, as Fortune observed, nearly all the major manufacturers were ‘radically rethinking’ their recipes – and much else. Some committed to rid their products of artificial flavors...
and colors; some had them certified as genetically modified organism (GMO)-free. Some bought up organic brands, introduced new ‘all-natural’ lines, or invested in vegan startups; some launched interactive websites such as Campbell’s whatsinmyfood.com and Kellogg’s openforbreakfast.com. Accused of churning out ‘edible food-like substances’ (Pollan 2009), at least some companies now reassure consumers that they offer ‘real food that is made with real ingredients and fits into real lives’ (Alexander 2015, 21).

Some of food manufacturers’ most ambitious commitments focus not on what ingredients they use but rather how and where they are produced. In 2013, General Mills announced that by 2020 it would sustainably source 100 percent of its ten ‘priority ingredients’ (Lynch 2014) from US corn to Madagascar vanilla; Kellogg’s, Coca-Cola, and PepsiCo, among others, have since made similar sustainable sourcing commitments. A number of companies have pledged to significant time-bound cuts in their total greenhouse gas (GHG) emissions, including those occurring in their supply chains.

In a 2016, Journal of Peasant Studies commentary on food regime analysis, Friedmann pointed to the corporate embrace of sustainability as one of several reasons to question the analytical value of the concept that she and McMichael had developed years before. McMichael’s notion a corporate food regime, in particular, she argued, ‘turns a method into a presumed object, at best something we think we know in advance, and at worst something that is imagined to act powerfully - and uni-directionally - in the world’ (Friedmann 2016, 674). Without assuming that corporate talk about sustainable agriculture amounted to substantive action, much less a capitalist transition on the scale that food regime scholars have traditionally documented, she called for more conversation with other literatures, and more attention to what corporations ‘actually do.’

This paper takes up both of Friedmann’s recommendations. While she references literature relevant to epochal sociotechnical transitions (Geels 2002), this paper draws on scholarship useful for examining what corporations do and say in the context of a set of multi-stakeholder initiatives (MSIs) to assess and improve agricultural sustainability. Focused on this more micro and immediate scale, the paper does not join the long-running debates about food regime theory in general (Goodman and Watts 1994; Campbell and Dixon 2009), or McMichael’s (2009) conception of the corporate food regime in particular (Pechlaner and Otero 2010; Otero 2012; Jakobsen 2018). Nor does the paper pass judgment on whether such initiatives are likely to make commercial agriculture more sustainable, even in the narrow sense of more eco-efficient. Certainly they invite familiar critiques of corporate environmentalism, i.e. that it relies on technological fixes to sustain business as usual (Wallace and Kock 2012; Clapp, Newell, and Zoe Brent 2018). Yet a closer look finds that the corporate actors are themselves in unfamiliar territory, in more than one sense. They are dealing with what are for them novel problems, with new tools (which, as I explain, differ from the standards and certifications long deployed to govern agri-food supply chains) in places where they often have limited knowledge and influence – all with uncertain environmental and commercial payoffs. In short, a closer look at these initiatives provides new insights into the limits of and challenges to business power (Fuchs 2005; Falkner 2017).

Friedmann has called the greening of agri-food corporations a ‘dance of creativity and appropriation’ (2016, 675). This paper borrows the metaphor of a dance—one that is largely unrehearsed—to describe the food industry’s sustainability initiatives. It does so through three assertions. First, these initiatives have seen plenty of stumbling. Of note

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were early projects that overestimated both consumers’ interest in information about food’s complete environmental footprint and the supply chain’s ability to generate it. Second, the effectiveness of these initiatives depends on both companies’ ‘partnering’ with rivals and the guidance of other actors, ranging from large environmental NGOs to academic social scientists. And third, even with all that support, companies do not entirely command the room. In contrast to earlier supermarket-led efforts to certify select products as ‘food from somewhere’ (Campbell 2009), today’s food industry sustainability initiatives also seek to enlist producers of commodities such as corn and soy, the raw material of ‘food from nowhere.’ Especially in the United States Midwest, these producers – mostly large-scale family farmers – have proven reluctant partners.

Up to a point, political economy perspectives on corporate power help to explain the tensions observed both among companies and between companies and other actors, such as NGOs and farmers. I discuss some of the most pertinent scholarship below. However I also draw from the overlapping literatures on global assemblages and science and technology studies (STS), which are in some ways more suited to this paper’s scales of analysis. In particular, these literatures help us appreciate the contingency of the MSIs’ efforts, how individual actors contend with limited knowledge, troublesome tools, and the enrolling of others in their sustainability work and how, under these circumstances, critical scholars might productively intervene.

The paper draws from an ongoing study that has consisted of semi-structured interviews, document analysis, and extensive participant observation at MSI events (Freidberg 2017a). Since 2014 I have interviewed roughly 50 MSI participants, most of them corporate sustainability personnel but also MSI staff members and representatives of participating NGOs, universities and grower organizations. Among the corporate interviewees, the majority work for major branded food manufacturers, with a smaller number representing retailers, commodity trader/processors, and agricultural input suppliers. The MSI events have included annual summits as well regular participation in two MSIs’ working groups.

**Varieties and contingencies of corporate power**

Although the ‘world historical’ perspective of food regime analysis (Friedmann and McMichael 1989) has not traditionally focused on the diverse forms and interests of corporate power, other strands of political economy scholarship have done so. Three are especially germane here. The first examines power as exercised within ‘global chains,’ broadly defined, the second on corporate agri-food governance, in and beyond supply chains, and the third on the divisions and differences that limit ‘business power.’ Most notable about the first is how much the frames of analysis have broadened over time. While the earliest writing on global commodity chains distinguished between those ‘driven’ by either buyers or producers (Gereffi and Korzeniewicz 1994) later typologies accommodate more objectives and scales of governance, as well as more potentially influential actors, such as NGOs and standard-setting bodies (Ponte and Sturgeon 2013; Bair and Palpacuer 2015). They also recognize that buyer power does not preclude supplier agency, meaning that effective governance is never a given (Bair and Werner 2011; Dallas et al. 2017).

To appreciate the different ways and places that power can be both exercised and challenged is perhaps especially important in analyses of corporate agri-food governance, given the dispersed and varied nature of agricultural production and the often high-
profile nature of the concerns – whether about food safety, quality, sustainability, or the welfare of workers and animals – that such governance is supposed to address. Accordingly, Clapp and Fuchs (2009) distinguish between corporations’ instrumental, structural and discursive power—that is, their abilities to directly influence regulatory decisions (i.e. via lobbying), predetermine regulatory options, and frame problems and solutions in ways that reinforce their own legitimacy (see also Clapp 2016). On one hand, all three types of power have helped make private agri-food governance the norm, especially at the global scale, in that major food retailers and other ‘big brands’ are now expected to not only regulate the quality and safety of their own products, typically via standards (Fuchs, Kalfagianni, and Havinga 2011), but also contribute to solving problems ranging from deforestation to smallholder poverty to child malnutrition (Blowfield and Dolan 2014; Elder and Dauvergne 2015; Street 2015; Dauvergne 2017). On the other hand, with this expectation comes visibility but not necessarily credibility or any other payoff. Consumers who associate ‘Big Food’ with unhealthy ingredients may not be convinced by (or even care about) companies’ goals to source those ingredients sustainably (Scott 2018), especially if high-profile NGOs raise doubts about either the goals themselves or companies’ abilities to meet them (e.g. Greenpeace 2018).

Falkner (2017) also recognizes the capacity of environmental NGOs and activist campaigns to undermine corporate legitimacy, despite their relatively limited resources. The primary focus of his ‘neopluralist’ perspective, however, is on the differences between corporations that can play to activists’ advantage, and that limit corporations’ overall power. The European public’s opposition to GMOs, for instance, led brand-sensitive retailers to first label and then ban GMO products, thus depriving biotechnology firms and North American food processors of a major market. More recently, varied corporate stances on climate policy highlight the differences not only between industrial sectors—i.e. agri-food versus oil – but also between ‘technological leaders and laggards’ (Falkner 2017, 33). Even in the many consortia, stewardship councils, commodity roundtables and other MSIs that corporations have voluntarily joined to address a recognized problem – including, in this case, environmental risks to raw material supplies – diverse interests and capacities make for likely conflict, or at least persistent tensions.

In short, an abundance of scholarship on corporate governance in and beyond agri-food supply chains helps explain not only why many companies have joined MSIs devoted to agricultural sustainability, but also why their collective market power might not get them what they want. To appreciate what happens inside these initiatives, however, it helps to downscale yet further, and examine the different relationships within them, as well as how different actors understand them. Among other things, this scale of analysis reveals how much corporate actors depend on others for certain kinds of knowledge and information access, and how much these matter to their own conceptions of who is credible and who is a sustainability leader versus laggard.

One source of insights into such relationships is the scholarship on global assemblages (Collier and Ong 2005). While the basic notion of assembled actors, technologies and practices has seen wide and varied use in agri-food studies (see for example Forney, Rosin, and Campbell 2018) the most pertinent studies examine contemporary global projects to govern specific industries, trades and livelihoods. Whether focused on community forest management (Murray Li 2007), the international bioethanol market (Hollander 2010), or the certification of sustainable fisheries, aquaculture and palm oil production (Köhne
2014; Havice and Iles 2015; Vandergeest, Ponte, and Bush 2015), these studies highlight how many things must come together – temporally, geographically, ideologically – to stabilize and legitimate governance arrangements for any length of time.

What makes such assemblages global is not necessarily their geographic scope so much as their claims to universal goals and guiding principles, such as an emphasis on ‘science-based’ rule-making (Hatanaka 2010). Suffice to say that universals are always defined and operationalized somewhere, and in ways that may be rejected elsewhere (Collier and Ong 2005). This is especially true of projects to govern places and subjects as diverse and spatially dispersed as farmers tend to be. Studies of smallholders’ encounters with global standards regimes find many examples of how they variously interpret, negotiate or otherwise maneuver around requirements (Dunn 2005; Hatanaka 2010; Ouma 2010). Similarly, the food industry’s sustainability initiatives have found that even industrial-scale farmers do not necessarily agree with their measures of sustainable agriculture. The assemblage framework recognizes the likelihood of such tensions, and the amount of strategizing and outreach needed to win even farmers’ minimal cooperation.

Assemblage thinking also attends to the role of non-humans in making governance arrangements cohere – or not. In the MSIs examined here, for instance, the minimal cooperation needed from farmers is a willingness to share certain data, typically via online platforms. In theory the data then flow down the supply chain to the companies that want to be able to claim progress toward their sustainable sourcing goals. In practice, the different MSIs have spent years working on both technical roadblocks in the data flow (incompatible and overly complex platforms, among others) and the question of what it can credibly say about agroecologies that vary across both space and time, even in the monocropped US Midwest. Put somewhat differently: whereas political economy analyses tend to see either social movements or uncooperative locals (i.e. smallholders) as the primary threats to the legitimacy and effectiveness of corporate governance (Friedmann 2005), the assemblage approach acknowledges a much broader range of potentially destabilizing forces, not all of them overtly oppositional.

Tools to (try to) assess and improve

As the previous examples suggest, scholarship on assemblages overlaps with STS in its appreciation for how governance depends on science and technology, broadly defined. Science needs to provide guidance and credibility; technology needs to (among other things) facilitate visibility, communication and the disciplining of subjects, all at a distance. But can corporate power ensure these things happen? On one hand, a long line of STS research documents how different forms of corporate power – instrumental, structural and discursive – have together shaped both the direction and outcomes of scientific research, especially in fields with high commercial stakes such as biotechnology, pharmaceuticals and nutrition (Kloppenburg 2005; Folker, Holm, and Sandøe 2009; Sismondo 2011; Clapp and Scrinis 2016). They have also helped build scientific as well as philanthropic support for ‘climate smart agriculture,’ now the focus of a global MSI which Newell and Taylor argue will expand markets for corporate goods ranging from GMOs to crop insurance (Newell and Taylor 2017).

On the other hand, STS scholars do not assume that a corporation’s power, however defined, explains either how or how successfully it mobilizes science or technology
toward a particular end (Latour 1990, 56). The fact that Coca-Cola spent millions of dollars on research that exonerates sugary beverages from blame for obesity (O’Connor 2015) does not mean it can buy credible evidence that it sources corn syrup sustainably. Getting such evidence always requires enrolling subjects, human and otherwise, and that requires technologies besides (though including) money (Latour 1983; 1990). It also requires a stable and widely accepted understanding of what counts as evidence, which is by no means assured even in long-established research fields (such as nutrition; Maki et al. 2014). Indeed this was one of the initial and ongoing tasks of the MSIs examined here: to determine what broader audiences would consider acceptable evidence of on-farm sustainability, and what kind of tools would be needed to collect it.

To an extent, the resulting assessment techniques resemble the ‘feedback loops’ established by supermarkets in the late 1990s (Campbell 2009), in that they are supposed to generate information that will help companies both govern distant farms and demonstrate accountability. But supermarkets at that point primarily wanted information certifying farmers’ compliance with standards for food quality, safety, and social responsibility. This information helped supermarkets govern what they considered high-risk supply chains (typically due to the perceived potential for food scares or scandals), and also respond to social movement demands for ‘food from somewhere.’ While these risks and demands have hardly gone away, the MSIs examined here seek to address the more global (as in universal) risks posed by climate change and resource scarcity, and they seek to do so with data rather than certifications. This has required developing new tools for collecting information, and introducing them into supply chains where their uptake is by no means assured.

From an STS perspective, all these recent developments offer opportunities to examine how science and technology operate as ‘political agents’ (Jasanoff 2004, 14) with important but not predetermined effects on how, and with whose participation, the corporate pursuit of agricultural sustainability unfolds. In other words, such a perspective does not assume that the MSIs and their tools represent simply the latest manifestations of corporations’ power to govern the food supply in ways that suit their own bottom-line interests.

The false dawn of ecological transparency

If market power alone were enough to drive progress toward sustainable sourcing, no company would be better positioned to do so than Walmart, the world’s largest retailer. That was the hope, anyway, when Walmart announced in 2009 that it would create a ‘global sustainable product index’ (Food Industry News, July 21 2009). A database of consumer goods’ cradle-to-grave environmental and social impacts would, in theory, enable Walmart to generate quantitative, comparable information about every product it sold. As both consumers and Walmart used this information to make choices – consumers about what to buy, Walmart about what to stock—suppliers would, in theory, compete to offer them measurably more sustainable goods (Kanter 2009). Walmart emphasized that while it had not yet determined how to produce this information much less share it with consumers, it would draw guidance from a newly-formed group of suppliers, NGOs and experts known as the Sustainability Consortium (TSC).

The most breathless media coverage described Walmart’s proposed index as an ‘environmental game changer,’ heralding a ‘a new kind of capitalism’ (Kanter 2009), and
the ‘dawning of the age of ecological transparency’ (Goleman 2009). The project was not entirely unprecedented, however. In 2007 the world’s third largest retailer, the UK-based Tesco, had committed to universal carbon footprint labeling. Working with the consultancy Carbon Trust, it would need data on the cradle-to-grave GHG emissions for some 70,000 product lines. Like Walmart, Tesco stressed that greener products would not cost more. As its chief executive put it, ‘to achieve a mass movement in green consumption we must empower everyone – not just the enlightened or the affluent’ (Leahy 2007).

Both retailers anticipated that suppliers’ efforts to minimize waste and energy use would, if anything, make sustainable products less expensive – unlike the certified organic, fair and ethical goods that had previously served as the mainstay of retailers’ social responsibility claims (Friedmann 2005; Guthman 2007).

Yet within three years Tesco had given up on carbon labels, and TSC had quietly changed course. Walmart’s future sustainability index would no longer provide consumers with information about individual products. Instead Walmart would use sets of ‘key performance indicators’ (KPIs) to survey and score suppliers on broad categories of products, such as bread or diapers. Framed as multiple-choice questions about specific social and environmental concerns in different products supply chains, KPIs were supposed drive change through business-to-business (‘B2B’) rather than consumer-facing disclosures.

Why the change of plans? Briefly, it had become clear that generating universal environmental product ratings and labels would take far longer than expected – potentially centuries – yet have little effect on consumers’ purchases (The Grocer, February 4, 2012). The latter problem I return to shortly. The slow pace, meanwhile, owed only partly to the complex and data-intensive modeling (known as life cycle assessment, or LCA) required to calculate product footprints precisely enough for labeling (Freidberg 2015). The more basic problem was a lack of data, period. Consumer goods companies with otherwise sophisticated systems for tracking sales, costs, and delivery schedules knew little about where or how their raw materials were produced. Food manufacturers knew the least of all, especially about the commodity ingredients sourced through long and scattered supply chains. In short, the earlier hype about ‘game-changing’ labeling projects assumed that if corporations as powerful as Walmart or Tesco began asking questions about products’ environmental impacts, suppliers – helped, it was assumed, by rapid scientific and technological advance – would find ways to answer them. This did not happen, at least not quickly enough.

**Needing answers and others**

Yet the questioning continued, especially in the food industry. Indeed, although the two retailers’ product labeling and rating projects failed in their original intent, they demonstrated to manufacturers what the environmental modelers already knew: namely that most of food’s environmental impacts occur on the farm (not in transport or packaging, as was once assumed) (Weber and Matthews 2008; Mogensen et al. 2011). Many of Walmart’s KPIs asked about the processes behind those impacts, such as fertilizer and irrigation use; most manufacturers did not have answers. By the early 2000-teens it was also clear that agriculture was also where food companies were most acutely exposed to extreme weather and other effects of climate change. In the years since they have come under increasing pressure to disclose their supply chain emissions, water use and
other measures of material risk to investor-facing organizations such as CDP (formerly the Carbon Disclosure Project) and Ceres (Grossman 2012; Pattberg 2012). NGOs such as Oxfam and Greenpeace also began rating food manufacturers’ environmental programs, with particular attention to how far up their supply chains they reached, and how much they disclosed (Greenpeace 2016; Oxfam n.d.).

The external inquiries and mounting evidence of farm-based environmental risks together prompted many Big Food companies to publicly commit to time-bound sustainable sourcing goals. At the same time, companies stepped up their participation in MSIs where they hoped to generate not only answers to the many questions asked of them, but better answers over time. The most important of these include Field to Market, the Sustainable Agriculture Initiative (SAI) Platform, the Cool Farm Alliance, the Stewardship for Specialty Crops Index (SISC), and the Innovation Center for US Dairy.

All these MSIs define sustainability as a process of continuous and measurable improvement. It is a stock business definition, easily criticized for helping companies claim progress on a ‘journey’ without committing to any particular destination (Milne, Kearins, and Walton 2006). But alongside the fact that many of the MSIs’ corporate members have indeed committed to specific goals and deadlines, it is striking how much effort they devote to assessing progress in ways that offer little direct benefit to brand image. They are collecting data, for instance, on the efficiency of on-farm energy, water, land and nitrogen use, as well as on water quality, soil health, and habitat conservation. Even showing progress requires several years of data, but in the meantime none of this information is destined for a label. If the food industry once thought that consumers would make use of what Walmart described as ‘complete’ environmental information about their products, market research soon indicated otherwise. During Tesco’s short-lived carbon labeling project it became clear that not even the small proportion of shoppers who understood the ‘grams of CO₂’ unit showed any interest in using this information to seek out low-carbon products (Upham, Dendler, and Bleda 2011).

The limited marketing value of food companies’ agricultural sustainability assessment activities can be read two ways. On one hand, it underscores that these activities are not just about marketing or even just meeting external demands for disclosure, whether from Walmart, NGOs or investor-facing agencies; rather, to varying degrees, they are driven by real concerns about the sustainability of raw material supplies. On the other hand, it is a problem. After all, the food manufacturers participating in the MSIs mentioned above (Unilever, General Mills, Kellogg’s, PepsiCo, Mars, Campbell, among others) place enormous value in their individual brands, which have suffered in recent years from the tarnished image of ‘Big Food’ as a whole. Collectively they have perhaps never had greater need for effective green marketing. But companies have also grown cautious about making green claims that they cannot support with hard evidence – thus the need for farmers’ data. In short, while the relative invisibility of these data-collection efforts speaks to intents other than greenwash, the invisibility itself is not intended.

Like the goal of continuous improvement, the multi-stakeholder form of corporate agricultural sustainability initiatives invites familiar critiques, i.e. that they serve mostly as performances of participatory governance, aimed more at garnering legitimacy for corporations and large environmental NGOs than giving voice to other stakeholders (Cheyns 2011; Fuchs et al. 2011; Ponte and Sturgeon 2013). The MSIs examined here are clearly exclusive organizations. Their memberships are limited and costly, their meetings
typically private. But it is also clear that their seemingly most powerful members – at least as defined by their positions in ‘buyer-driven’ agri-food supply chains (Gereffi and Lee 2012) – could not accomplish much by themselves. As early efforts to build Walmart’s sustainability index showed, both the retailer and its big brand suppliers lacked not only basic information about the environmental impacts of their raw material supplies, but also the knowledge and influence they needed to get it.

The lack of knowledge reflected these companies’ traditional expertise in food, not agriculture. At least initially, their sustainability teams were small and typically staffed by managers redeployed from elsewhere in their companies, and equipped with little background in agriculture or environmental science. One described a previous position in R&D, working on questions ‘like how can we put the coating on cereal so we don’t need to use so much sugar.’ They admit to ‘steep learning curves;’ one said he wished he had ‘a silver bullet to learn faster.’ The lack of influence, meanwhile, reflected the length of processed food supply chains; manufacturers sourced the bulk of their ingredients from commodity trading companies or cooperatives. They often knew only very roughly where the raw materials had been produced, and even if they did know, they had no direct contact with or control over the producers (Freidberg 2017b). As one manager said of farmers growing corn, one of the raw materials her company had pledged to source sustainably, ‘We’re talking about people who don’t owe [company X] a thing.’

Food retailers and manufacturers have joined agricultural sustainability MSIs, then, not just to perform inclusiveness and unity (Rajak 2011). More fundamentally, they need access to other stakeholders’ expertise and relationships. In the US-based Field to Market, for instance, these include all the major supply chain actors – the commodity traders (ADM, Cargill, etc.), the agricultural technology suppliers (Bayer Cropscience, Syngenta), and commodity growers’ associations—as well as environmental NGOs (WWF, the Nature Conservancy, Ducks Unlimited), several universities, and a few government agencies (such as the National Resource Conservation Service (NRCS)).

While some of these members joined mainly to influence how the industry defines sustainable agriculture, many have since ‘partnered’ with manufacturers to help them collect farm-level data. Field to Market provides a precompetitive space to negotiate such partnerships, which require commodity traders in particular to share what was traditionally considered proprietary information. ‘If we want to be trusted [we] have to start lifting the veil,’ one trading company sustainability manager explained, ‘Not that there is anything nefarious behind the veil, you just need to share some actual numbers and that causes indigestion with some folks.’ Sharing (and collecting) numbers also requires a lot of work which, these managers say, their downstream customers seem not to fully appreciate, and usually will not pay for. One manager noted how a major manufacturer had been ‘begging us’ to collect data faster, ‘but they do not want to talk money.’ In short, manufacturers’ need for more information about their raw materials has supply chain partnerships more common, but it has not made them easy.

The universities, government agencies, and some of the NGOs, meanwhile, are ‘affiliate’ members of Field to Market, meaning they do not pay fees or have voting rights. Structurally they appear marginal. But Field to Market’s corporate members nonetheless depend on their participation, because their scientists understand the models which the organization uses to assess on-farm environmental impacts (in fact some of these models run directly off NRCS servers), and their extension agents know the farmers it seeks to
assess. They appreciate why farmers may be reluctant to adopt certain conservation practices, and know about government and university resources that might convince them to do so. The academics and other affiliate members, in other words, are not mere tokens brought in to legitimate corporate decisions. Rather, corporate members have relied on their knowledge from the beginning. This reliance reflects a broader trend observed by agri-food scholars who have conducted research in and with companies (Biltekoff 2015): as corporations’ roles in food supply governance have broadened, they have increasingly looked beyond corporate walls for advice and feedback (Schleifer and Penders 2011; Evans 2015).

In this regard, large environmental NGOs are especially key players (Hyatt and Johnson 2016). Besides their in-house scientific expertise, corporate sustainability initiatives rely on their skills as conveners, and their insights into the broader terrain of environmental and social activism. WWF, for example, founded many of the existing commodity roundtables; it also regularly consults for companies at the early stages of their sustainable sourcing programs, to help them identify and prioritize supply chain risks. While these include longer-term supply security risks, companies also look to WWF and other ‘partner’ NGOs to alert them to emergent reputational risks. As one manufacturer’s sustainability manager said, ‘we try to work with them to say, “what do you see? What do you think needs attention?” so that, hopefully, before that becomes a public issue we can start taking steps to manage it.’ Another manager described NGOs acting as sounding boards; when his company is developing a position on a particular issue, ‘we tell them first to see, “what is it that you think?” Then we go to the marketplace.’ As one senior manager noted, some NGOs have gotten very ‘savvy’ in playing these advisory roles; they know that they have to ‘deliver expertise, and deliver something that we do not have, besides their credibility.’

That corporations depend on other stakeholders does not mean, of course, that power and resource asymmetries do not influence how MSIs such as Field to Market operate. Rather, it means that, in these contexts, the relationships between different stakeholders are themselves important but not predetermined sources of power. This underscores the value of examining such relationships empirically, rather than assuming that the presence of corporations will determine their outcomes.

‘Do not tell them what to do’

Much of the practical work of agricultural sustainability MSIs centers around the tools needed to collect and analyze data about on-farm sustainability. ‘Tools’ refers here to an array of online platforms or spreadsheets, populated with questions. Examples include the Fieldprint Calculator, the Cool Farm Tool, SISC’s metrics calculator, and SAI-Platform’s Farm Sustainability Assessment (FSA). As mentioned earlier, most of these tools have been developed not to certify farmers’ compliance with standards, but rather to quantify their performance on a set of key metrics, or indicators (the one partial exception is SAI-Platform’s FSA, a 140-question survey that includes both practice-based and quantitative questions). All the tools both relay farmers’ data to certain downstream companies (in some cases in anonymized, aggregate form) and provide individual farmers with feedback on how they perform on the different metrics. By allowing farmers to compare their numbers to regional benchmarks and track progress over time, these tools – like
many other forms of metrics-based assessment in modern life (Beer 2016) – are supposed to encourage ongoing improvement.

Critiques of private governance note how industry-dominated MSIs tend to produce tools that serve industry interests (Ponte 2014; Konefal, Hatanaka, and Constance 2017). Accordingly, Konefal, Hatanaka, and Constance (2017)’s analysis of Field to Market and SISC finds that their ‘relatively homogenous’ memberships have developed metrics that primarily measure eco-efficiency, i.e. GHG emissions or water use per bushel. These metrics define progress as producing more with less, also known as sustainable intensification (Garnett et al. 2013). This ‘weak’ definition of sustainability (Thompson 2010) does not assure the integrity of broader ecosystems, but holds obvious appeal for companies that look to intensive agriculture as either a source of cheap raw materials or a market for their own agro-inputs. It also resonates with large environmental NGOs such as the Nature Conservancy, which sees intensification as necessary to save wildlife while also feeding a growing world population (Jenkins 2018).

Eco-efficiency measures of agricultural sustainability are indeed more industry-friendly than possible alternatives (Konefal, Hatanaka, and Constance 2017). But this level of analysis also does not reveal much about what went into their production. These MSIs’ internal discussions about their metrics reveal a more complex set of concerns than simply maintaining business as usual (which, for many of the participating companies, has not gone so well lately). Here I focus on two. The first concern is to be credible, and in particular to have credible evidence of continuous improvement. The second, somewhat at odds with the first, is not to be prescriptive or intrusive.

Credibility is a major theme in these MSIs’ portrayal of their metrics and related tools. They emphasize that their metrics generate quantitative evidence of ‘outcomes’ (i.e. reduced GHG emissions, water conserved) rather than assuming that only certain practices produce those outcomes (SISC n.d.). SISC’s website boasts case studies of ‘Success stories, backed up by real data.’ A Field to Market promotional video tells companies, ‘Don’t just tell your sustainability story. Show it with the Fieldprint Calculator’ (Field to Market 2016a). One Field to Market participant said getting data that could demonstrate ‘impact on the ground’ appealed to the organization’s corporate members. ‘I think what a lot of companies really hunger for is … to really be able to talk about the result of their work and not just the fact that 100 percent of the farmers that they are working with have adopted a certain practice.’

Corporate sustainability managers echo this point. Wherever they talk about their work – companies’ annual reports, disclosures to the various ‘rater and ranker’ agencies, conversations with NGOs, websites or social media – quantitative evidence of impact is either required or at least desirable. Hard numbers about reductions in water use or fertilizer runoff could help them avoid accusations of greenwash, and prove that any particular narrative was, as one manager put it, ‘not just a fluff piece.’ Even if those numbers were of no use in labeling, she said, they could be woven into the stories about farmers posted on a company’s web site, offering valuable ‘proof points.’ Not least, that data can reinforce sustainability managers’ credibility within their own workplaces, helping them prove to senior executives that their work has impacts even if they do not appear on a company’s profit and loss statements. Those executives, observed one consultant, do not care about ‘a bunch of anecdotes;’ they want to see numbers.

While sustainability managers want those numbers to show improvement – i.e. that the farmers in a particular sourcing region have measurably reduced their water use or
nitrogen runoff per bushel of crop – they emphasize that they do want to dictate to farmers how it should happen. This is another selling point of metrics-based tools: unlike many standards, they do not prescribe practices, at least not overtly. MSIs such as Field to Market and SISC play up this point; as SISC’s website says, ‘by focusing on outcomes instead of practices, individual operators are free to innovate and find the practices that work best for them’ (SISC).

Sustainability managers often mention the concern not to be prescriptive even if their companies source products or key ingredients through contract relationships (formal or otherwise) that are by definition prescriptive. Supermarkets’ relations with their fresh produce and ‘own brand’ goods suppliers are familiar examples (Harvey 2007; Ouma 2010), but not unique. Fast food retailers such as McDonald’s also maintain long-term, more or less direct relations with producers of key raw materials, as do some manufacturers (i.e. PepsiCo’s relations with potato growers fit this model; so do Campbell’s relations with tomato growers). Even if such companies have long required the raw materials themselves to meet precise size and varietal standards, their sustainability managers emphasize that they prefer to ‘work with’ suppliers rather than impose standards on them (which does not mean this never happens). Prescribing practices, said one manager, leads to farmers who are ‘just driven by the audit,’ while not necessarily making measurable improvements.

In supply chains where manufacturers buy commodity ingredients from trader-processor companies such as Cargill and ADM, corporations’ capacity to require specific practices of farmers is limited at best. This might seem surprising given the commodity traders’ sizable shares of national and international grain markets (Murphy, Burch, and Clapp 2012). But their sustainability managers emphasize that their companies’ one-off transactions with farmers limits what they can know about much less ask of them. As one said, ‘the farmers are independent. They are going to grow things the way that they see fit.’ Technological changes have, moreover, increased farmers’ independence, at least vis-à-vis the trading companies. Farmers’ home computers and cell phones have eroded the traders’ once-privileged access to information access, while on-farm storage (up 25 percent in 15 years) has reduced farmers’ dependence of the traders’ own massive facilities (Bunge 2017; Meyer 2017; Parker and Blas 2018). The proliferation of bioethanol processors, meanwhile, has given corn growers an alternative market for their corn, one that often offers better prices while asking fewer questions. None of this means that such growers are unaffected by corporate consolidation in the agricultural input industry or corporate investment in agricultural real estate (Clapp 2018; Mckinstry 2018). It simply means that they are under no obligation to cooperate with the downstream agri-food corporations that would like them to adopt certain practices, including the sharing of data. Thus those companies’ sustainability managers must, in their interactions with growers, avoid what Field to Market participants often refer to as ‘thou shalt.’ ‘Talk to them like you are just friends,’ one manager advised; ‘also do not tell them what to do.’

Those managers must also try not to intrude, meaning that they should not take up too much of farmers’ time or compromise their privacy. Metrics-based tools address this concern with mixed success. While the MSIs promote their platforms as convenient and user-friendly, a perennial meeting topic is how to ease farmers’ survey fatigue. Companies in Field to Market typically send field agents to help farmers fill out the Fieldprint Calculator, at least the first time, to make sure they complete it and do not enter too much
of what one agent called ‘dirty’ data. The MSIs also describe their tools as secure, but participants admit that farmers’ fears about who might get access to their data remain a major obstacle (Freidberg, under review). Most of the MSIs can, however, promise farmers that they will not be subject to the kind of audits required for many agricultural certifications. In other words, no one will come to their farms to verify the accuracy of whatever data they entered into a particular tool. Instead (at least in the case of Field to Market) any data verification happens at the corporate level, and at the corporations’ expense. From the beginning, participating growers’ associations have made clear that their own members consider this a non-negotiable condition: alongside no ‘thou shalt,’ no audits.

Despite efforts to be neither prescriptive nor intrusive, data collection has gone more slowly than anticipated. Tellingly, the companies in Field to Market (the only MSI examined here that reports on these numbers) were collecting data on only 2.8 million acres of US farmland as of late 2017, from around 2000 farmers, whereas three years prior they had set a collective goal of 50 million acres by 2020. Another perennial meeting topic, then, is how to improve the ‘value proposition’ so that farmers find it worthwhile to share data and otherwise cooperate with companies’ sustainability initiatives. While paying them per bushel premiums has proven effective (Bentlage et al. 2016), companies generally prefer not to pay extra for ingredients that are not bound for premium-priced products. But beyond the problem of scarce data is the problem of what the data can say. At some of the companies that now have several years worth farm-level data, sustainability managers are unsure. By now they have many stories of individual farmers who have adopted specific conservation practices and seen measurable improvements. But will companies be able to point to broader improvement trends in their sourcing regions, much less claim that their data collection has helped drive those trends? One manager was doubtful. ‘There is a lot of grey, and the grey for big food companies equals risk.’ He was referring to the risk of greenwash accusations by NGOs looking to ‘make a splash.’ But another Field to Market participant mentioned the possibility that ‘You look at the numbers and they do not show what you hoped’ – i.e. improvement. This is perhaps the most basic risk of a data-driven approach to sustainability governance: if less prescriptive than other approaches, it might also prove simply ineffectual.

Conclusions

In her 2016 JPS commentary, Harriet Friedmann remarked,

Since 2005, when I first noticed the dance of creativity and appropriation between social initiatives and agrifood capitals, it has become increasingly clear that capital is very clever indeed. Corporations can hire the best writers and imagemakers and use the internet and public meetings to capture ideas, words and even (yes) practices emerging from social initiatives.

Corporations have certainly adopted some of the words and ideas associated with ‘alternative’ sustainable agriculture movements, and now promote some of their practices. Although the MSIs examined started with basic eco-efficiency metrics, some have since developed metrics for habitat conservation and soil health. Some of their corporate members have helped found the Midwestern Row Crop Collaborative (https://midwestrowcrop.org/), which aims to improve water quality and soil health, and the even
newer Soil Health Partnership (http://soilhealthpartnership.org/). While these MSIs merit as much critical scrutiny as any other (soil health no doubt represents a commercial opportunity for some participants), they illustrate that the dance Friedmann described continues.

Joining such initiatives is just one way that Big Food companies have invested in knowledge and expertise that previously seemed unnecessary. This paper only exists, in fact, thanks to many (if not all) companies’ new interest in scholars’ perspective on their work. But despite increasing knowledge and reflexivity, companies still need the help of others, and still sometimes embark on projects that turn out to be misdirected if not impossible. The public relations skills of the ‘best writers and imagemakers,’ as Friedmann put it, cannot by themselves compensate for too little data, much less drive the improvements in on-farm sustainability that the data may or may not reveal. Capital may be clever, but it is not infallible. Thinking about corporate sustainability initiatives as assemblages helps us appreciate the contingent and unrehearsed nature of their governance projects, just as an STS perspective draws attention to the technologies and knowledge they deploy, albeit not always effectively.

Friedmann’s dance metaphor offers useful guidance for analyzing not just agricultural sustainability MSIs, but Big Food projects of reinvention more broadly. It suggests empirical questions about (among other things) who companies seek to partner with, and why; which tools and practices have legs, and where; and how companies explain and otherwise attempt to recover from their own missteps. It also underscores how corporations are actively trying to figure out what steps to take next. For critical agri-food scholars, this implies that their sustainability initiatives deserve at least as much attention as alternative food movements have long received (Evans 2015). As in this other research tradition, this means thinking strategically about points of leverage and potential allies, and about how to not just expose failings, but also perhaps help address them.

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